

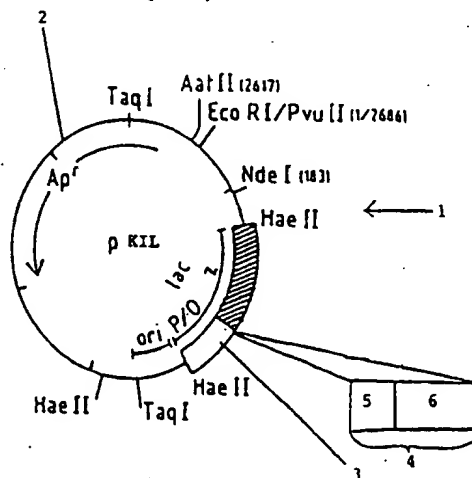


## DEMANDE INTERNATIONALE PUBLIÉE EN VERTU DU TRAITE DE COOPÉRATION EN MATIÈRE DE BREVETS (PCT)

<p>(51) Classification internationale des brevets <sup>5</sup> : C12N 15/64, 15/70, 1/21 // (C12N 1/21, C12R 1:19)</p>	<p>A3</p>	<p>(11) Numéro de publication internationale: WO 94/03616 (43) Date de publication internationale: 17 février 1994 (17.02.94)</p>
<p>(21) Numéro de la demande internationale: PCT/BE93/00051 (22) Date de dépôt international: 2 août 1993 (02.08.93) (30) Données relatives à la priorité: 9200696 31 juillet 1992 (31.07.92) BE (71) Déposant (pour tous les Etats désignés sauf US): UNIVER- SITE LIBRE DE BRUXELLES [BE/BE]; Avenue F.D. Roosevelt 50 CP 165, B-1050 Bruxelles (BE). (72) Inventeurs; et (75) Inventeurs/Déposants (US seulement): BERNARD, Phi- lippe [BE/BE]; 52, rue Cluysenaar, B-1060 Bruxelles (BE). GABANT, Philippe [BE/BE]; 9, rue Van Bommel, B-1030 Bruxelles (BE).</p>	<p>(74) Mandataire: VAN MALDEREN, Michel; Office Van Malderen, Avenue J.-S. Bach 22/43, B-1080 Bruxelles (BE). (81) Etats désignés: AU, BB, BG, BR, BY, CA, CZ, FI, HU, JP, KP, KR, KZ, LK, MG, MN, MW, NO, NZ, PL, RO, RU, SD, SK, UA, US, VN, brevet européen (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), brevet OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).  Publiée Avec rapport de recherche internationale. Avant l'expiration du délai prévu pour la modification des revendications, sera republiée si de telles modifications sont reçues. (88) Date de publication du rapport de recherche internationale: 31 mars 1994 (31.03.94)</p>	

(54) Title: CLONING AND/OR SEQUENCING VECTOR

(54) Titre: VECTEUR DE CLONAGE ET/OU DE SEQUENÇAGE



## (57) Abstract

A cloning and/or sequencing vector (1) comprises, incorporated in an autonomous replication vector (2), at least one nucleotide promoter sequence (3) and at least one nucleotide sequence (4) coding for a fusion protein active as a poison. Said nucleotide sequence (4) is obtained by fusion of a coding nucleotide sequence (5), comprising several unique cloning sites and a nucleotide sequence (6) coding for a poison protein. The vector host cell of the invention is also disclosed.

## (57) Abrégé

La présente invention concerne un vecteur de clonage et/ou de séquençage (1) comprenant incorporé dans un vecteur à répllication autonome (2), au moins une séquence nucléotidique promotrice (3) et au moins une séquence nucléotidique (4) codant pour une protéine de fusion active en tant que poison; ladite séquence nucléotidique (4) étant obtenue par la fusion d'une séquence nucléotidique codante (5), comprenant plusieurs sites uniques de clonage et d'une séquence nucléotidique (6) codant pour une protéine poison. La présente invention concerne également la cellule hôte du vecteur selon l'invention.

PCT/BE 93/00051

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 5 C12N15/64 C12N15/70 C12N1/21 - //(C12N1/21,C12R1:19)

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 5 C12N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	MOLECULAR & GENERAL GENETICS vol. 226, no. 1/2, April 1991, SPRINGER INTERNATIONAL, NEW YORK, US; pages 297 - 304 P. BERNARD AND M. COUTURIER 'The 41 carboxy-terminal residues of the miniF plasmid CcdA protein are sufficient to antagonize the killer activity of the CcdB protein' cited in the application	1,3-5,7, 10
Y	see page 299, right column, line 1 - page 302, right column, line 14 --- -/-	6,8,9, 11-17

☒ Further documents are listed in the continuation of box C.☐ Patent family members are listed in annex.

## \* Special categories of cited documents:

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Date of the actual completion of the international search

13 January 1994

Date of mailing of the international search report

14.02.94

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	J. CELL. BIOCHEM. SUPPL. 0 vol. 16B , 1992 page 104 M. COUTURIER AND P. BERNARD 'The mini F plasmid CcdB killer protein is a poison of E.coli topoisomerase II'	1,7
Y	Keystone symposium on molecular mechanisms in DNA replication and recombination, Taos, New Mexico, USA, January 25-February 1, 1992; see right column, paragraph 2 ---	11-17
Y	PROC. NATL. ACAD SCI. vol. 89, no. 6 , 15 March 1992 , NATL. ACAD SCI., WASHINGTON, DC, US; pages 2056 - 2060 J.C. PIERCE ET AL. 'A positive selection vector for cloning high molecular weight DNA by the bacteriophage P1 system: Improved cloning efficiency' cited in the application see page 2058, left column, line 6 - page 2059, right column, line 24 ---	6,8,9, 11-17
Y	GENE vol. 42, no. 3 , 1986 , ELSEVIER PUBLISHERS, N.Y., U.S.; pages 345 - 349 B. HENRICH AND R. PLAPP 'Use of the lysis gene of bacteriophage PhiX174 for the construction of a positive selection vector' cited in the application see page 345, left column, line 1 - page 346, left column, line 15 ---	6,8,9, 11-17
Y	GENE vol. 42, no. 3 , 1986 , ELSEVIER PUBLISHERS, N.Y., U.S.; pages 253 - 263 I. KUHN ET AL. 'Positive selection vectors utilizing lethality of the EcoRI endonuclease' cited in the application see page 259, left column, line 1 - line 44 ---	6,8,9, 11-17
Y	MOLECULAR CLONING, LABORATORY MANUAL, SECOND EDITION vol. 1-3 , 1989 , CSH, LONG ISLAND, NY,US; pages 4.12 - A9-A13 SAMBROOK, FRITSCH AND MANIATIS cited in the application see page 4.12, paragraph 5 voir page A9-A13 ---	11,14
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,Y	J. MOL. BIOL. vol. 226, no. 3 , 5 August 1992 , ACADEMIC PRESS LIMITED, LONDON, UK; pages 735 - 745 P. BERNARD AND M. COUTURIER 'Cell killing by the F plasmid CcdB protein involves poisoning of DNA-topoisomeraseII complexes' see page 737, line 1 - page 741, line 29 -----	6,8,9, 11-17

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